Reading from Deposition of to Ham Bates

IN THE UNITED STATES DISTRICT CO. FOR THE DISTRICT OF NEW JERSEY Civil Action No. 83-2864(5A)

AMTONIO CIPCLONE, individually, and as Executor of the Estate of Rose D. Cipollone,

TRANSCRIPT OF

Plaintiff.

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Newark, New Terme

LIGGETT GROUP, INC., a
Delaware Corporation; PHILIP
MORRIS, INCORPORATED, a
Virginia Corporation; and
LOEM'S THEATRES, INC., a
Hew York Corporation,

Pebruary 19, 198 APTERNOON SESSIO

Defendants.

8 8 P O R E:

HONORABLE H. LEE SAROKIN UNITED STATES DISTRICT JUDGE

APPEARARCE BE

BUDD, LARWER, GROSS, PICILLO, ROSEMBAUM, GREENBERG & SADE, BSQS., BY: MARC 3. MDELL, SSQ. Attorneys for the Plaintiff.

ARNOLD & PORTER, ESQS., BY: PRTER K. BLEAKLEY, ESQ., BY: TROMAS E. SILPEN, ESQ. Attorneys for the Defendant, Philip Morris.

Pursuant to Section 753 Title 28 United States Code, the following transcript is certified to be an accurate record as taken stemographically in the above-entitled proceedings.

PHYLLIS T. LEWIS, C.S.R.
Official Court Reporter United States District Court
P.O. Sox 25588, Newark, New Jersey 07101

Main Pi File Room

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PHYLLIS T. LEWIS, CSR & JOANNE N. ROUSTON, CSR

APPEARANCES: (Continued)

GREENAUM, SONE, SMITH, RAVIN, DAVIS & BERGSTEIN, ESQS.,
BY: ALAN S. MAAR, BSQ.,
--and-WEBSTER & SHEFFIELD, ESQS.,
BY: DOMALD J. COMM, ESQ.,
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Philip Morris and Lorillard.

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PHYLLIS T. LEWIS, COR & JOANNE M. BOUSTON, CSR.

1	A There wasn't enough evidence.
2	MR. CORN: I have an objection to this quantion.
3	THE COURT: Where are we?
4	MR. COHN: Page 46, line 11.
5	The question goes to the end of the page and the
6	answer is on the following page at line 15. The question is
7	totally improper. There were objections at the time.
8	THE COURT: The grounds, Mr. Cohn?
9	MR. COMM: Your Honor, it is leading, it's
10	objectionable as to form, lacks any foundation.
11	THE COURT: I'll sustain the objection.
12	MR. EDELL: Page 50, line 19.
13	Q You did not consider yourself to be an expert on the
14	affects of digarette smoking on human beings in 1952?
15	A I couldn't say that that was true.
16	MR. EDELL: Page 56, line 20.
17	Q You have never been a specialize in lung diseases,
18	correct, zir?
19	. A You bet that's correct.
26	MR. EDELL: That's it, your Honor.
21	THE COURT: All right. Thank you.
22	Rest, St. Edell.
23	MR. SDELL: Thank you, your Honor.
24	Your Honor, I'm going to now read from the
25	deposition of Dr. Bates, William W. Bates, who was director

1	of research at Liggett.
2	THE COURT: All right.
3	MR. EEARNZY: Your Fonor, two things.
4	Defendants have a copy for your Joner that's marke
5	with the designations and counter-designations.
6	THE COURTS Thank you. I appreciate that.
7	I'll trade you this, Mr. Kearney.
8	MR. KEARNEY: Defendants also have a juror book on
9	Dr. Bates and Dr. Kensier's deposition exhibits that we'd
10	like to have handed out now.
11	And that's a copy for you.
12	MR. EDELL: I have no objection.
13	Can I see them?
14	MR. KEARNEY: They have been given to you.
15	MR. FEARREY: Your Honor, may I band them out or
16	the Clerk hand them out?
17	THE COURT: Give them to the Clerk to give them
18	out.
19	Will there be anything in their books?
20	RR. EDELL: I believe there is an insert for Dr.
21	Bates.
22	THE COURT: We have to work through both books
23	then.
24	MR. EDELL: Mr. Ecarney, are those documents
29	throughout the deposition?

1	MR. EBARHSI: Yes, I believe they are. When they
2	come up in the deposition, I'll raise them.
3	MR. BDELL: They're different than the ones we have
4	here.
5	INS COURT: That's what I want to know.
5	MS. WALTERS: Three of the documents are identical
7	to the ones we have. Two of those documents are contained
8	in designated testimony of the defendants that we don't
2	think is admissible under the rule of completeness at this
10	time.
11	MR. KEARNEY: May I suggest when we get to that
12	THE COURT: I'm not ruling on any of that.
13	I'm trying to do this with ease for the jury. You
14	nave to make it clear to them where it is they can find
15	this.
15	HR. REARMEY: As the decument comes up, I'll bring
17	it to your attention.
18	THE COURT: Again, the jury should shide by the
19	rule that we've had throughout and that is only turn to
28	semething if I direct you to do so and otherwise, do not
21	look through the exhibit book.
22	THE COURTS Mr. Edell.
23	MR. SDELL: Mr. Jacobs is going to read for Dr.
24	Bates,
25	Your tioner, at the beginning of the insert for Dr.

Sates, we have a biographical statch based upon defendants! 1 2 request for admissions. THE COURT: The jury may burn to that then, the 3 first page after the Bates tab. 4 5 MR. TDELL: William W. Bates, Jr. was employed by Liggett in its research department from June, 1950 to June 5 7 1. 1975. He was a tesearch chemist from June, 1950 to 1953. 8 Be was the assistant director of research from 1953 10 to 1960. He was associate director of research from 1960 to 11 12 1964. 13 Dr. Bates was director of research at Liggett from 14 1964 to June 1, 1975. William W. Bates, Jr. was on the Board of Directors 15 of Liggett from August 1, 1964 to April, 1975. 16 17 18 (The fellowing is deposition testimony read of Dr. William Bates, Jr.) 19 28 21 MR. EDELL: Seginning at page ten, line three. How old are you, sir? 22 0 23 Sixty-five. What's your date of birth? 24 Q 25 October 12, 1919.

1	Q Now is your health?
2	A Generally well.
3	Q Aze you taking any medications?
4	A Tes.
5	O What type of medications are you taking?
6	A I take Corgard, trade mema is Corgard, C-o-r-g-s-r-d.
7	It's a heart regulatory drug of some nort.
a	Q You have a heart condition, mir?
9	A Nothing serious.
10	Q What type of condition de you have?
11	A Occasional heartbeat irregularities
12	Q The medication that you take usually compensates for
13	chat?
14	A It has so far.
15	MR. EDELL: Is that enough, Mr. Cohn?
16	MR. COHM: There is a slight portion on page 11.
17	MR. EDELL: I don't know whether we have to qu in
18	through that.
19	NR. COHM: Lines eight through 16. Can you pick t
20	at the bottom?
21	MR. EDELL: I can read it.
22	THE COURT: I don't think it's necessary.
23	MR. SDELL: Continue at page 11, line 22.
24	Q Have you had an opportunity to talk to any lawyers
25	regarding this deposition prior to today?

1	
1	A Yes.
3	Q With whom did you have an opportunity to speak, sig?
3	A Primerily with Mr. Cohn.
4	Q- And?
5	A And also my actorney, Mr. Pope.
5	Q When did you speak to Mr. Conn for the first time
,	regarding this deposition?
8	A Some time in March. I don't recall the date.
9	Q Did you speak with him over the phone or did he come
10	down and see you?
11	A I spoke to him over the phone and he came down and to
12	#00 TO.
13	Q Now much time did he spend with you, not on the phone,
14	when he came down to speak with you, approximately?
15	A. About four hours roughly.
16	MR. COHM: Your Romor, I ask that lines 17 through
17	24 be read on page 12.
18	THE COURT: Yes. Read that, please.
19	Q Where did you meet, mir?
26	A At my bone.
21	Q What did you discuss?
22	A He besically, he asked me questions about what work
23	did while I was at Liggett.
24	Q Do you recall any specifics of the conversation that you
l	

1	A Not really, no.
2	Q Did Mr. Cohn tell you who he represented?
3	A Yes.
4	Q I'm sorry?
5	A I have known of Mr. Cohn's law firm for quite a long
¢	time.
7	Q His law firm had done work for many years for Liggert a
8	Hyers. correct?
9	A Yes, that's correct.
10	Q As a satter of fact
11	MR. COMB: I object to the next question. Down
12	through
13	THE COURTS Are you starting at 197 Is that what
14	you plan to do, anyway, Mr. Edell?
15	MR. EDELL: That's where Mr. Cohn wants me to begin
15	at 19, your Honor.
17	MR. CORM: I would start at 19, your Monor. This
18	at page 13.
19	MR. EDELL: I begin my designation begins again
20	page 14, line seven.
21	THE COURTS You can read that, beginning of line
22	19.
23	MR. EDELL: You're going to sustain the objection
24	with regard to nine through 187
25	THE COURT: I thought nobody wanted that, the way

3	I'm looking at it. Nobody's requested that.
2	MR. MOZUL: I think maybe the defendants'
3	designation is listed in your book, your Honor.
4	TUB COURT: I have in green, I thought was the
3	plaintiffs' and in yellow the defendants' request.
ę	MR. CONNE That's correct.
7	THE COURT: Have I got it right?
£:	MR. EDELL: We have a different copy. Ours is in
Ş.	yellow and blue, but I don't know whether it makes a
10	difference.
11	MR. COHR: Are we on page 137
12	AR. EDELL: Let me see.
13	We've designated on page 13 down through 10, even
14	on Mr. Conn's copy.
15	THE COURT: I'll sustain the objection.
16	HR. EDEL: Okay.
17	Q Did Mr. Cohn discuss with you what questions you should
18	anticipate my auking here today?
19	A As I recall, he just asked, primarily asked me questions
20	which I tried to answer, if I could.
21	Q But he didn't discuss with you what questions you should
22	enticipate my acking during the course of this deposition.
23	Is that correct?
24	A To the best of my knowledge, that's correct, yes.
25	O Was there anyone else present other than Mr. Cohn at the

1	time of the March meeting?
2	A Mo.
3	Q Any time subsequent to that march meeting did you again
4	meet with Mr. Cohn or a representative of his office?
5	A Tes.
6	2 When did that occur?
7	A It would have been last Friday.
9	Q With whom did you meet, sir?
ġ	A Mr. Cohn and Mr. Decker.
10	Q Francie Decker?
11	A Yes.
12	Q What did you discuss last Friday?
13	A Essentially the same thing we did the first time.
14	Q They went over again with you what you did at Liggett &
15	Myers?
16	A Yes.
17	Q Were there now questions that he had of you concerning
18	what you did at Liggett & Myers?
19	A I can't recall there were any new questions. There may
20	have been.
21	Q Did be discuss with you at that time, that is, last
22	Friday, what questions you should anticipate my asking
23	during the course of this deposition?
24	A Primerily just asked questions and I tried to give my
25	best answer to them.

_	RR. SDECG: Starting at page 20, 1180 23.
. 2	Q Can you give us the benefit of your educational
3	background, sir?
4	A I attended several schools around South Carolina and
5	graduated from nigh school in Camden, South Carolina.
5	O When did you graduate?
7	A 1937. I graduated from the Cicadel in 1941 with a 3.5.
a	in chemistry and received a Ph.D. degree in physical
9	chemistry from Duke University in 1951.
10	HR. COMM: Your Monor, we request on page 21, lines
11	eight through 14 be read. They're anortening up this I
12	would just request now on page 21, lines eight through 14.
13	MR. EDELL: I have no problem with that, Judge.
14	2 Did you go to rebool full-time from the time you
15	graduated the Citadel until you received your Ph.D.
16	A Go, I was four years in the army.
17	ু Where were you stationed?
19	A About 15 different stations in the United States, and in
19	England and France.
20	MR. COHM: Your Monor, we request that the on
21	page 36, lines eight through 18 be read.
22	MR. EDELL: Your Roner, I dea't understand bow this
23	has anything to do
24	THE COURT: Sustained.
25	MR. EDELL: Page 35.

1	THE COURT: Well, I guess when I say gustained, I
2	mean the request to read those portions is not granted.
3	MR. EDELL: I understood that.
4	THE COURT: Sustain your objection to reading.
5	MR. SDELL: Page 35, line 16.
6	2 Did you ever become aware of Dr. Gross doing work for
7	Liggett & Myers?
3	A I dià.
è	Q When did you become aware of that, air?
10	A Probably sometime 1950 or so.
22	Q How did you become aware of that?
12	A I really don't know. Before the laboratory building for
13	research department was built, the embryo research
14	department of Liggett & Myers occupied several labs at Duke
15	University chemistry building and I knew they were wither
16	from them or very shortly after I came went to work for
17	Liggett & Myers, just became aware of the fact Dr. Gross had
18	some sort of Arrangement with Liggett & Myers.
19	Q It wasn't until after you began your employment with
20	Liggett?
21	A I'm not sure whether it was after I became employed with
22	Liggett & Myers or whether it was while I was still in
23	graduate school and Liggett & Myers had some laberatory
24	story space is the Duke chemistry building.

Did anyone else at Duke University de any consulting

1	work for Liggett & Myers other than Dr. Gross?
2	A Yes.
3	Q Who was that, sir?
4	A At one time or another Dr. Marcus Hobbs consulted and
5	Dr. Prederick Carkis was also a consultant with Liggett .
6	Myers.
7	2 Do you recall when you began your employment with
3	Liggett & Myers?
9	A Yes, in June, 1950.
10	Q Did Liggett & Myers have a research development
11	department at that time?
12	A The building was just being completed.
13	Q Who was doing the hiring of these people who were going
14	to work in the research and development department at
15	Liggett & Myers?
16	A Dr. Darkia.
17	Q Dr. Darkis had been hired as the director of the
10	department?
19-	A That's defrect.
26	Q You told us that Dr. Darkis was the director of research
21	for Liggett & Myers sometime around 1930.
22	You were hired in what capacity, sir?
23	A Research chemist.
24	Q Who also was working for Liggett & Myers is the research

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department at that time?

1 Dr. B. J. Mackney, Mr. Menry Shulk, Mr. Thomas Walker 2 Mr. Harvey Molibrook. There may have been some orner, hur 3 those are the only ones I remember. It was a relatively small group. 3 What did you ou? 3 My primary remponsibility was to study read tobacco fin 7 the standpoint of some relatively group chemical 9 composition, total augars, total nitrogen, total alkaloid. 0 and attempt to relate these gross chemical features with the traditional judgment of quality of tobacco that had been 10 made by the leaf buyers in the past and to work with the 11 12 various experiment stations in tobacco growing states --13 make that tobacco growing states -- states that grow tobacco 14 normally used in digerettes rather then digar or chewing or 15 other type and to keep abreast of the new varieties of tobacco being developed at the various stations. 15 17 MR. EDELL: Is that enough, Mr. Cohn? MR. CORN: Well, I would prefer if yoursead down to 18 Tine 18. Mr. Edell. 19 28 Q Will you, please? 21 Tou say experiment stations, were those Stations 22 cun by Liggett & Syers? 23 No. Virginia Polytechnic Institute, Classon University, North Carolina State College, they were state, 24 federal experiments stations, mostly land grant colleges. 25

1	Q Were you aware of any other work that was being done at
2	that time in the research department by anyone else?
3	A That was mostly the work that was being done at that
4	time in the research department.
5	O About how long did you spend most of your time with leaf
5	tobacco?
7	A Well, several years. And for at least ten years it was
8	my primary job.
9	MR. EDELL: Continuing at page 43, line nine.
10	Q Was there a library there?
11	A Yes.
12	2 Was anyone responsible for the library?
13	A freentially there was a librarian. I say essentially.
14	I don't remember. It was a matter of could have been a
15	matter of neveral months after we woved into the building
16	pefore she arrived. She and was a B.S. chemist graduate
17	of Duke. Mary Ruth Lake.
18	Q When was the figgt time you became aware of Dr. Wynder's
19	week?
20	A I guess it would have been January, 1954.
21	@ New did you become aware of it?
22	A Ob, somebody called my attention to his article in the
23	Journal of American Medical Association, I believe it was.
24	Q That was the first time that you became aware of Dr.
25	Wynder's work?

1	A Yes.
2	Q Prior to that time were you aware of any work done by
3	anyone attempting to analyze what, if any, effect the
4	products produced by digarette smoking would have on animals
5	or numen beings?
ć	- A Not to my recollection.
7	Q While you were studying for your Ph.D., you cold us you
8	did work related to tobacco. In that correct?
9	A Turkish robacco. Oriental is a more precise term.
10	Q Did the thought ever cross your mind there might be in
11	the tobacco or in the products that were produced by burning
12	robacco that might be deleterious?
13	A No.
14	9 Were you ever aware of again during the time period
15	you were working on your Ph.D were you aware of any
16	actempts to isolate the different materials that were
17	produced during the pyrolization of tebacco or digaratte
15	paper?
19	A He.
20	Ma. CORM: Your Honor, I would object to the next
21	question. I believe Dr. Bates' personal practice is
22	irrelevent.
23	THE COURT: Lines five through ten?

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MR. COMM: Yes, your Senor.

THE COURT: Sustained.

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1	MR. COMB: There is a series of questions
2	MR. EDELL: Page 51.
3	MR. CORM: with the same objection. Since that
4	objection was sustained, we withdraw our requests for some
\$	of the others.
8	MR. EDELL: I know that.
7	Q Were you suppressed were you susprised at the results
ō	of Dr. Mynder's work?
Ģ	You may answer the question, sir.
10	A I don't know that I was surprised. I don't recall that
11	I had any particular reaction to it when I first heard about
12	ıt.
13	Q Well, you were working for a digarette manufacturer for
14	about four years, correct?
15	A Yes.
16	Q And Dr. Wynder's study was the first study that you were
17	aware of that indicted, sir, cigarette smoking as a
13	potential cause of cancer, correct?
19	A The work that I was doing at the time was such that
20	hearing about Dr. Wynder's work really didn't, as I recall,
21	didn't bother me much one way or the other.
22	MR. EDELL: Page 53.
3 3	Q Do you recall Liggett & Myers contracting with Arthur D.
24	Little in 1954 to do some research?
25	A I recall that it was done.

1	being deme at Arthur D. Little, but it was a significant
2	time later, not years later.
3	Q Did you discuss with Dr. Darkis the work that was being
4	done by Arthur D. Little?
5	A I espentially did. But when it was, I really don't
5	xaow.
7	्र
3	4 In 1964.
3	3 Se died. Is that correct?
10	A No. He died about a year ago or two years ago.
11	Q When he left in 1964 you took over as director; correct?
12	A That's correct.
13	O Dr. Bates, I am going to show you a document marked
14	Sates 2 for identification. It is a letter from Dr. Darkis
15	to W.A. Blount, February 4, 1954.
16	MR. EDELL: This is Plaintiff's Exhibit 6160, your
17	Bonor. In the jury binder, Page 1.
18	THE COURT: Any objection?
19	MR. CONN: No objection.
29	THE COURT: Page I the jury may turn to.
21	Q It attaches what Dr. Darkis refere to as notes which Dr.
22	Hobbe and be made during a dertain meeting.
23	I am going to ask you whether or not you recognize
24	Dr. Darkis' signature on that document?

1	Q You had the opportunity to observe his signature during
2	the
3	A I had seen it a number of times and it appears to be fir.
4	Darkin' signature.
5	7 Who is Mr. Blount?
6	A It depends what date that was.
7	Q Let's talk about the letter, February 4, 1954.
3	A Okay. Well, he was vice-president of manufacturing for
9	Liggett & Myers.
16	9 Who is Mr. Pew?
11	A Mr. Few was president I believe at that time of Liggett
12	6 dyecu.
13	Q Do you recall that Dr. Robbs in 1954 was acting as a
14	consultant to Liggett & Myers?
15	A I don't recall specifically that he was at that
16	particular date. I know be was. Did act as a consultant
17	over a number of years.
13	Q Do you know approximately the years that that consulting
19	egrangement began and ended?
20	Well, it ended about 1971 or '2, along in there. But
21	when it began, I do not know.
22	O Did you ever discuss with Dr. Darkis, Liggett & Myers
23	position with respect to the work that was being performed
24	by the tobacco industry research committee?
25	A I think I have I know I have discussed the metter

1	with Dr. Darkis.
2	. & Do you recall Dr. Darkis telling you that it was his
3	epinion that the committee for the tobacco companies was not
4	working too effectively on cancer?
5	A ! don't recall him making that statement.
5	Q Or. Bates, I am going to show you a document which we've
7	marked as Bates 3 for identification.
8	RR. FDELL: Your Honor, that is Plaintiff's Exhibit
9	308 in the binder pages six and seven.
10	MR. EMARNEY: We have no objection to that
11	document. The document in its complete form is contained in
12	defendants' binder at tab one. I believe only three pages
13	of it is in plaintiff's binder.
14	THE COURT: All right. With that understanding,
15	You have no objection to the jury turning to pages six and
16	seven then?
17	RR. KEARMET: None, your Sonor and if the jury is
18	inclined they can look at tab one for the complete exhibit.
19	WR. WALTERS: We have the complete exhibit to offer
20	into evidence.
21	THE COURT: Jury can turn to pages six and seven.
22	MR. STELL: Yes. We have the whole exhibit.
23	Q It is a memoranda to R. Stevens of March 29, 1954.
24	subject, Liggett & Myers conference en March 25, 1954.
25	Question on page 67: I meant to direct your

attention, sir, to the first paragraph where it says Dr.

Fieser asked if it was possible for the tobacco industry to
support cancer agencies. Dr. Darkin replied that it was
Liggett and Myers' policy that they could get more work done
by using an agency such as ADL.

Te stated that it was his opinion the committee for the tobacco companies is not working too effectively on cancer.

Does that refresh your memory, sir, with respect to what Dr. Darkis' opinion was concerning how effectively the Tobacco Industry Research Committee was working on the issue of cancer?

A They -- his position and later my position has been that a directed problem-solving research program is zore effective than making many small individual grants to people.

9 Yhy is that, sir?

A Because it's directed and can proceed in a step-by-step fashion. When a granting agency makes grants, they normally make grants that individual scientists come in and request funds to support and the grant is made and direction cannot be changed or improved until the end of the granting period; whereas, with an integrated, directed approach, if new information becomes available, it can be acted on without waiting a year or two years to act on it.

1	It's a philosophy of research direction that Dr.
2	Derkis hed and ? had?
3	Q That was Dr. Darkis' opinion as far as you recall
4	discussing the metter with him?
5	A Yes.
6	Q Did you or Dr. Darkis ever inform the funding companies
7	of the TIRC of your opinion in that regard?
6	A I don't know that Dr. Darkis ever informed other
9	companies. I know he informed the management at Liggett 5
10	Hyers of his belief.
11	O How are you aware of that, sir?
12	A I have beren present when he has done that.
13	O Were you aware in 1954 of what Liggett & Myers' position
14	was regarding the information linking smoking and cancer?
15	A Yes.
16	Q What was that?
17	A. That there was no proven link between emoking and
78	CABGO .
15	Q You said there was no proven link. Was there an
20	Association?
21	A Well, the press made many associations, yes.
22	Q Well, was it Liggett & Myers' opinion that there was no
23	relationship or that it hadn't been proven to a certainty?
24	sie?
25	A There was no relationship.

	A security the threaten such description and
- 1	Q Do you recall Dr. Darkis ever describing the
5	relationship between digarette smoking and cancer as weak as
3	opposed to no relationship at all?
.5	A No. I don't recall that.
5	- Q I am going to direct your attention again to the
ទី	document, Bates 3 for identification, now, upecifically to
7	the second paragraph that I began to read previously, see if
	that refreshes your recollection.
9	MR. EDELL: This is the same document.
10	Q Dr. Derkis pointed out that Liggett & Myers major
11	concern is to produce cigarettes that the public will ase
12	and them to make these digarettes the best possible from a
13	health standpoint.
14	Dr. Derkis continued that the talk of cancer man
15	reduced the sales of digarettes. He then made the following
15	points:
17	One. In Liggett & Myers' opinion the information
18	linking smoking and cancer is weak.
19	Two, they do not believe in the use of negatives so
20	in tearing down other people's work.
21	Three, the work must be done on Liggett & Myers'
32	product.
23	Your, it would be good if absolute proof could be
24	found indicating that tobacco is safe to use and not a cause
25	of lung cancer.

I still don't recall him saying that. 1 That doesn't refresh your recollection? 2 No, it does not. 3 Who is Dr. L. Leiserson? 5 A Yes. Who is that, sir? 6 He was an organic chemist that worked at the Liggett 7 research department for awhile. 8 Did you have an opinion back in 1954 as to whether or 9 Q not cigarette smoking might be harmful? 10 If I did, I don't recall what it was. 11 Do you ever recall having an opinion regarding cigarette 12 13 smoking and health? My opinion is that cigarette smoking isn't connected 14 15 with health. At all. Is that correct? 16 Q That's correct. 17 A Do you believe that cigarette smoking causes cancer? 18 Q I do not. 19 Α Do you believe that cigarette smoking may cause cancer? 20 $\mathbf{0}$ I don't. 21 A 22 Q Why? I just don't believe it. 23 A What is the basis of that belief? 24 0 I've never been convinced that there is a connection. 25 A

1	Q You have never been convinced that there may be a
2	connection. Currect?
3	A I've just never been convinced that there is a
4	connection.
5	7 That wasn't my question, mir.
6	A Ali right.
7	2 What do you bese that on, that statement?
ā	A Anything that I have seen in the past twenty years.
3	G Did you ever discuss with Dr. Machle his opinions
10	regarding digarette cmoking and health?
11	MR. COMN: Could we have the balance of the page
12	read, Page 86.
13	MR. EDELL: What do you base that on, that
14	ktatemant?
15	HR. COHN: Anything between the past twenty years,
16	and I auk that the next question and answer be read also.
17	MR. EDELL: Gkay.
18	Q Anything and everything, is that right?
15	A With the sub total.
20	@ Did you ever discuss with Dr. Machle his opinions
21	regarding eigerette smoking and health?
72	A Hot that I recall.
23	Q You were aware that Dr. Machle was working as a
24	consultant with Arthur D. Little on the issue of cigaretty
25	smoking and its biological effects. Correct?

1	A I know he at one time was working with Arthur O. Little,
2	but I'm not I don't recall that I knew what he was doing.
3	Q Were you aware that Dr. Machle informed Dr. Mcose, Dr.
4	Darkin, Dr. Backney and Dr. Leiserson and yourself back in
5	1954 that there appeared to be something in the relationship
6	of smoking to cancer and in his opinion, the problem is one
7	of identification, measurement and eligination?
á	A I don't recall
3	Q I'm going to direct your attention
10	A that.
11	Q I'll direct your attention to Page 3 of Bates 4 for
12	identification, the first paragraph
ĽI	MR. EDELL: This is Plaintiff's Exhibit 307 and
14	it's in the binder at page nine, your monor.
15	MR. KEARNEY: No objection, your Sonor, and it
15	appears the sections that the defendants wish to highlight
17	appears at tab two at the defendants' books.
18	THE COURT: Jury may turn to Page 9.
19	Q I direct your attention to Page 3 of Bates 4 for
20	identification. The first paragraph where it states, quote:
37	Dr. Machle stated that there appears to be
22	something in the relationship of swoking to cancer. And in
23	his opinion the problem is one of identification,
24	measurement and elimination.

See if that refreshes your recollection with

25

respect to what Dr. Machle stated to you at that time. 1 2 A It does not refresh my memory. O That document noes in fact reflect you as being present 3 at that meeting, does it not, bis? 5 A It has my name on it, yes. Q Do you recall attending meetings with members of Arthur Ž 7 D. Little in Durham to discuss what was being done for 3 Liggett & Myers by Arthur D. Little? 7 A I have attended weetings. 10 Q Do you recall the results of the work performed by 11 Arthur D. Little for Liggett & Myers in terms of duplicating Dr. Wynder's work? 12 13 A Only to the extent that the animal's developed skin 14 tumors, but at a lower incidence than reported by Dr. dynder and Graham. 15 C Did Liggett & Myers inform the public of Arthur D. 15 17 Little's findings regarding --18 A Sventuelly did. 19 - Eventually about four years after the finnings were 20 mede? 21 I den't recall. 7 Tou don't remember? 22 A I don't recall. 23 Q The findings were not made immediately available to the 24 25 public is that. Correct, sir?

1	A That is Correct.
2	MR. COHN: Next lines, Page 31, 19 to 24.
3	THE COURT: Yes. Granted.
4	gues, usw northwarelni-ons excise was a very to retrem s as the C
5	public. Isn't that eight?
τ,	A I'm not certain.
7	C You know it wasn't a month of two. Right?
à	A I don't recall the time-lag.
9	? The reason that Liggett & Myers contracted with Arthur
10	D. Little to attempt to duplicate Dr. Wynder's sed Dr.
11	Graham's study was to determine whether or not the results
12	would be the same or similar to Dr. Wynder and Graham's if
3. 3	one used digarettes manufactured by Liggett & Ryers.
14	Correct?
15	A No. I don't think that was the reason.
15	Q What was the reason?
17	A To see if the results that were obtained by Wynder and
15	Graham could be replicated?
19	Q Why?
20	As Bermally in science one likes to have something that is
21	reproducible and replicable.
22	o why?
23	A Otherwise it's just a chance happening.
24	Q And what significance is it if the experiment is
25	duplicated or replicated in science?

1	A It means that it very likely, that the effect obser
2	is a real one.
3	Q Dr. Bates, I'm going to show you a document we mark
4	Nates 5 for identification
5	MR. EDELL: That is in the jusy binder page 13,
~	your Monor, 7-6191.
7	HR. EZARREY: No objection.
8	THE COURT: Jury may turn to page 13.
9	2 It is a memoranda from C.J. Kensier. Do you know who
10	that is?
11	λ Yes.
13	O Who is that?
13	A We's Dr. Charles Kensler at Arthur D. Little.
24	Q To Dr. L.W. Bass. Do you know who that is?
15	A Yes. He was an employee of Liggett Arthur D. Little
16	ittle.
17	${\cal Q}$. It is dated September 28, 19557. The subject is L and ${\cal H}$
18	meeting in Durham, North Carolina, December 28, 1955. It
19	lists in attendance Drs. Barkis. Hackney, Bates and Hopbs
20	for L and M. Drs. Thayer, Hainer and Kensler from ADL. I
21	ask yes, air, whether or not that refreshes your
22	recellection as to when ADL was able to reproduce Dr.
23	Wynder's study?
24	A It sounds as though the experiments are in progress, but
25	it doesn't it doesn't help me recall the time when they

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1 vere finished. 2 I'm going to show you a document which we marked as Bates 7. 3 MR. EDEGL: This is Plaintiff's Exhibit 310 at 4 5 binder mage 14, your Honor. 5 -MR. FEARMEY: No objection to that and the entire 7 exhibit is contained in Sanibit 3 W, the sections we chose 8 to highlight in the defendants' book. 9 THE COURTS Jury may turn to page 14. 13 Again, I don't mean to be ignoring Mr. Rearney's 11 comments. If you feel you wish to, you certainly can turn to the complete exhibit in the defendants' book. What page 12 13 MR. REARNEY: Tab three, Judge. 14 THE COURT: Thank you. 15 It is a report to Liggert's & Myers Tookco Company from Q . Arthur D. Little dated December 31, 1956, and it's entitled: 16 "The response of CAP-1, hybrid mice to the repeated 17 13 application to the skin of concentrated solutions of cionzette amoke tar. * The document contains a letter assissed 13 26 by Arthur D. Little to Dr. Darkis of December 31, 1956. 21 Why don't you take a look at this and see if it 22 refreshes your recollection as to when Arthur D. Little was able to duplicate the studies of Drs. Graham and Mynder? 23 24 According to this, in December of '56. Sir, is this report, which is marked as Bates 7, a 25

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1	report of a study prepared by Arthur D. Dittle in which
2	there was as attempt to duplicate the Mynder-Craham study?
3	A That is what it says.
4	Q Are you familiar with the efforts of Arthur C. Lizzie t
5	duplicate Dr. Wynder and Dr. Graham's study?
б	A Yes.
7	Q I am going to show you Page 1 of the report, which to
9	Roman numeral one, summary, ask you to look at the summary
9	and see whether or not the summary coincides with your
10	recollection of the results of the study.
11	A It's besically as I recall the outcome of those
12	experiments.
13	MR. EDELL: That's at plaintiff's exhibit 15, your
2.4	Honor, in the jury binder.
15	O Are the findings contained in the numbery of Bates deven
16	of any significance with respect to the issue of cigarette
17	amoking and health?
13	A I don't know.
19	Q You den't have any idea?
20	ă Do.
21	E Is any of the work that was performed by Arthur D.
22	Little for Liggett relevant in any way to the issue of
23	cigarette smoking and health?
24	A I'm not certain that it was.
25	2 One way as the other?

1	A NO.
2	Q Do you understand why biggett a Myors was funding th
3	work done at Arthur D. Little?
4	A To attempt to find our whether the results that Wynge
5	and Graham had published were repeatable, reproducible.
6	Q Was there not an attempt by Dr. Wynder and Dr. Graham
7	extrapolate from their experiment on mice to people?
8	A Tes, these was.
9	Q Was that one of the reasons why Liggett & Myers funded
10	the study, studies that we're discussing regarding the wor.
11	done by Arthur D. Little?
12	A I don't understand your question now.
13	O Well, if the work that was done by Dra. Graham and Dr.
14	Wynder only concerned sice, would it have had any
15	significance to Liggett & Myera?
16	A No.
17	2 The reason that it had some significance to Liggett 5
18	Myers is because there was an attempt to extrapolate from
19	that experience with sice to people, correct?
20	. A That's what Wynder and Graham attempted to do.
21	Q That's why Arthur D. Little was hired to duplicate or
22	attempt to duplicate Dr. Wynder and Graham's study, sorrect?
23	A To see if it was reproducible.
24	Q And it was reproducible, correct?
25	A Well, significantly so, yes.

•	A the riversale ages pranteresters coffaces coffacts stri
2	A That's right, treated groups were significant from the
3	controls.
4	Q What does that mean?
5	A It means that if he put enough digarette amoke
6	condensate on the backs of susceptible wice you get tumots.
7	Q In 1956, was experimentation with animals an accepted
8	means by which to conduct biological research?
þ	A I don't know what you meen by acceptable or what you
10	mean by biblogical research. It mouse painting
11	experiments were used rather widely, yes.
12	O Mpy?
13	A I don't know. I'm not a biologist but they were used.
14	Q You have no idea as to why mide were being used for
15	experimental purposes. Is that correct, sir?
16	A They were used as an indicator of the skin
17	tumorigenicity is the of compounds.
18	Q Is there a reason why they used animals to do that sort
19	of recessor?
20	Well, things don't get skin tueors and animals do and
21	so there is only one thing
22	left and that's animal.
23	Q Closest thing you can do is a souse. Is that correct?
24	A I don't know why the mice were chosen.
25	Q Did you ever learn why mice were chesen?

1	A No.
2	Q Who at Liggett & Myers was the individual who had
3	responsibility for evaluating the report of December 31,
4	1956 from Arthur D. Little which we marked as Bates seven
5	for identification?
6	A Dr. Derkis.
7	Q Did Dr. Darkis have any training with respect to
В	bipiogical scudies?
9	λ 70.
10	Q Definite any expertise in that area?
11	A No.
12	O Did anyone else at Liggett & Myers have any expertise in
23	the area of animal experimentation?
14	А 30.
15	Q You took over Dr. Derkis' responsibilities in 1954,
15	correct?
17	THE COURT: '64.
16	MR. BDELL: '64?
19	MR. JACOBS: That's correct.
20	200 EDELL: Let me just get a glass of water.
21	Page 107, line nine.
22	Q When you took ever as director of research in 1964 and
23	you received reports from Arthur D. Little, how would you
24	evaluate those reports?
25	A Hell, I would read them and discuss the reports with

1	people at Arthur D. Little.
2	Q Did you rely upon Arthur D. Little to give you advice
3	regarding the causal relationship, if any, between digaret
4	emeking and cancer?
5	A Relied on Arthur D. Little no interpret the biology of
5	the tests they were doing,
7	Q Did you rely upon them to give you their spinions on
3	whether or not the texts that they were performing and the
à	findings arising out of those tests would be extrapolated t
16	human experience?
11	A Yes.
12	O Did you follow their advice in that regard?
13	A Mostly.
14	Q Were there instances in which you did not follow their
15	advice?
15	A Well, I'm not there were, but I can't recall specifics.
17	MR. EBARNEY: Your Sonor, I don't know if that was
18	read correctly.
19	MR. EDELL: No. It says, no, "Well, I'm sure than
28	were.
21	I'll read it again so we have it in context.
22	Q Were there instances in which you did not follow their
23	advice?
24	A Well, I'm sure there were, but I can't recall specifics
25	MR. COMM: Your Honor, as long as we went down
ı	

1 there, the next question and answer? 2 THE COURT: Objection, Mr. Edell? 3 MR. MDELL: No. your Honor. THE COURT: Okay. 4 5 hid anyone at Arthur D. Little ever tell you that in 5 their opinion there was a relationship between digaracte 7 smoking and lung cancer? ä A I don't recall that they ever did. Ð MR. SDELL: Page 118. 10 when you say the mouse skin activity, you're talking 11 about the papilloms and carcinomas, correct? 12 Correct, that's correct. 13 Why was Liggett a Myers attempting to identify the 14 different elements contained in cigarette amoke subsequent 15 to Arthur D. Little performing the test as you just 15 described where they attempted to duplicate the efforts of Ors. Wynder and Graham? 17 18 We were interested in identifying the materials that may 19 be responsible for the souse skin activity and, if possible, 20 to alter the product in such a way that it would decrease 21 the contents of the materials and allow digarette smoking 22 condensate to be treated -- to be tested on mice and not 23 produce skin tumors. 24 Yhy? 3 23 Because of the real large-scale publicity that the

1	Wynder/Graham papers had received and we thought it woul
2	desirable not to have a product which did not react in t
3	manner.
4	Q You were doing this fractionization in an attempt to
5	identify the elements in digaratte make cout produced of.
6	cardinomes and papillomes in the Wynder and Graham study
7	in the Arthur D. Little study, correct?
2	A On the backs of mice, yes.
9	O The reason you were doing that was because there was
10	certain concern in the public regarding there studies,
11	correct?
12	A It was a concern we had as of the response of the
13	public.
14	Q What concern did you have of the response of the public
15	A We had a concern that they wouldn't amoke our
16	cigarettes.
17	O Pid you ever identify that portion of the digaratte
18	amoke or that element in digarette amoke that produced then
19	carcinomas and papillones?
20	A Ho.
21 .	Q New many years did you try to do that? When I say you,
22	I mean Liggett & Myers.
23	A From roughly '56 until I left the company.
24	2 That was the research, the research goals?
25	MR. CORR: Excuse me. Can we have the next

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1	question and answer? From he doesn't add that.
2	That's on page 21. You left out lines 20 and 2
3	Q Which is again in what year, sir?
4	A 1975.
5	MR. COHN: Can we have those two questions toget
5.	so the jury gets them?
7	TRE COURT: Read 17 through 21.
8	O How many years did you try to do that? Then I say yo
9	T wean Liggett & Myers.
10	A From roughly '56 until I left the company.
11	Q Which is again in what year?
12	A 1975.
13	Q Nes there any other goal, other than the research goa
14	#1¢?
15	A I don't know.
16	G Sir, did you ever hold an executive position with
17	Liggett & Myers?
18	A Director of research.
19	Q Did you ever held a management position?
20	A 100 · ·
21	Wese you ever on the Board of Directors?
22	A Tee.
23	Q When were you on the Board of Directors?
24	A From '64 to '75.
25	Q Your predecessor, Dr. Darkis, was on the Beard of

2	Directors on the board prior to your joining the board,
2	enrect?
3	A He was.
4	Q Was there any reason that Liggert & Myers was doing it?
3	A T know of no other reason.
5	Q It was never the purpose of Liggett & Myers, sir, to
7	streagt to identify the agent in digarette amoke which
8	caused these papillomas and carcinomas in order that the
9	agent could be removed and the cigarette marketed by
ra	Liggett?
1	A To see if it could be removed.
2	Q In order that you could commercially produce a digarette
13	without that agent. Isn't that correct?
4	A Hopefully that would be the case, yes.
1.5	Q That was the ultimate goal of this project, was it not,
.6	six?
7	A Tes.
8	MR. SDELL: Page 127, line four.
•	Q Dr. Bates, what's benspyrene?
•	A It's an aromatic hydrocarbon.
12	Man it been considered to be a carcinogen?
2	A It's been considered to be a neuse skin carcinogen, yes.
3	Q Are you aware of any studies which have shown that
4	benspyrene is considered to be a esseinogen in mice?
- 1	•

1	Q	Is beaupyrane produced during the pyrolization of
3	sie	Azettes?
3	A	Yes.
4	٩	So that the smoke that you get from digarettes contain
5	ben	apyrene, correct?
6 -	A	Yes.
7	Q	You were aware that bengpyrene caused cancer in animal
8	bac	k in 1954, were you not?
4	A	Along about there. I'm not certain whether it was '54
10	ot	155 or 156.
11	0	Did Liggett & Myers warn the consumer of its preducts
12	tha	t one of the elements contained in the smoke preduced by
13	its	cigarettes caused cancer in animals back in 1954?
14	A	Not to my knowledge.
15	c	Do you know why, sir?
16	A	No.
17	Q	Other than benspyrene, did Liggett & Myers ever identify
18	Any	other elements in digesette smoke that caused papillomas
19	or (Carcinenas in mice?
20		2 think there were some other aromatic hydrocarbons
22	100	htified in digerette smoke in small quantities that have
22	500	n reported to give skin tumors on mice. I can't hame
23	spe	cific compounds.
24	c	When was that escertained, that information?
	•	The complete to 184 on a lab of march was daing to

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lot of work with digarette smoke condensates and variou 2 sundry compounds were reported over a period of time. don't recall the dates or individuals. 3 MR. CORNE Your Bonor, we would request that sa \$ 136, lines 12 through the end of the page and on over (n 5 down to line 15. 7 THE COURT: Any objection. Mr. Edell? MR. EDELL: I don't have any strenuous objection, 8 9 Judge. 10 THE COURT: All right. 11 Q Mas there ever an attempt by Liggett & Myers to remove 12 these aromatic hydrocarbons from the smoke produced by its 13 cigarette? 14 Not specifically that I recall. 15 Q Generally was there an attempt? Mot generally and accepted. At one stage of the 16 research attempts were made to alter the composition of the 17 18 smeke by the addition of a catalyst so that it would 19 eliminate, a greatly reduce the mouse skin activity. 20 That was the palladium effort, sir? 21 .. That yes ---22 Is that correct? 23 That was -- the palladium was one. Quite a large number of effects. None of those hydrocarbons individually or 24 25 collectively based on their known skin activity could

1	account for the activity that was being observed in
2	eigarette emoke. They were all too minor of quantity.
3	Q Maw do you know that?
4	A From the from the properties of the quantities present
5	and the properties of the individual compounds, the quantic-
5	required to produce skin tunors on animals.
7	Q There's a dose response relationship?
ß	A Samically, yes.
9	C Sow do you know that?
10	A From published work on benzpyrene and some of the other
11	compounds.
12	MR. EDELL: Continuing at page 152, line 17.
13	MR. COSN: What page?
14	MR. STRLL: One 52.
15	HR. CORN: Thank you.
16	Q Save you ever heard of a person named Hainer?
17	A Yes.
13	9 Who is that?
19	A Re's a physical chemist. He was a physical chemist at
29	Arthur D. Little. He's deceased.
21	. Did be do any work for Liggett & Nyers?
22	A Yes.
33	Q Was there ever an attempt to develop a patent other than
24	the patent for palladium?
25	A For what?

1	a sot with breasact broances of riddetr a wharm or brokess
2	to be produced by Liggett & Myers?
3	A The Lask filter was patented, the element filter was
4	petented, the tark filter making machinery was patented.
5	There are others, yes, but those come to mind.
6	g who is W. C. Lothrop?
7	A He was an employee of Arthur D. Little.
3	C What, if any, work did he do for Liggett & Myers?
ņ	A I don't know that he did any work for Liggett & Myers.
10	I think be was a vice-president of the corporation and was
11	present at some of the meetings.
12	MR. EDELL: Page 166, line 22.
13	O We also discussed yesterday how much money was opent by
1.4	Liggett & Myers on work performed for it by Arthur D.
15	Little. Do you recall that discussion, sir?
16	A If it was mentioned, yes.
17	3 I'm going to show you
16	MR. COMM: Your Henor, I object to this question
19	and I object to the exhibit.
20	THE COURT: What page is it on, Mr. Edell?
21	MR. EDELL: Page 18 of the binder, your Honor.
22	THE COURT: Do you wish to be neard?
23	MR. COMM: Yes.
24	(The following takes place at sideber.)
25	THE COURT: What's the objection?

Pred Helser, who was then general counsel of Siggett to se when I was out trying a lawsuit in Grand Rapids.

testimony is totally irrelevant. Dr. Bates doesn't remember now much money it was. Mr. Edell wrote -- read in from Mr. Dey's deposition yesterday now much money was spent. I think this material is just totally irrelevant.

THE COURT: Is it already in the record?

MR. BDZLL: My recollection is that the project and the totals are different than that reflected is the document that Dr. Hold had. That, in fact, the figure is Dr. Hold's is seven million dollars for this period of time and actually only five million 900 was spant on the bio-res project, which as I understand, is the biological research project.

Do you understand what I'm maying? There is a million dollars discrepancy between how much money was being spent on research.

ER. COMB: This witness deesn't know that and he said so. An attempt to get in a letter that was in response to specific questions which were put to us by the Court is certainly not proof of that.

THE COURT: You're not challenging the accuracy of the information?

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MR. COMM: In the letter? 1 THE COURT: Yeah. 2 MR. COMM: No. I'm saying it did not attempt t 3 set down all the work that was done by Arthur D. Little : 4 5 Liquett. As Mr. Edell knows from the documents and the ň testisony, there was neveral projects going on, one of wh 7 was bio-res and others. 8 MR. 2020L: That's the biological research project 3 And you also ned advertising work was being done up at 10 Arthur D. Little, two, other consulting work was being don 11 by them. 12 MR. CDHN: I'm not talking about advertising. 13 There was no advertising work being done at Arthur D. 14 Little. That is not correct. There are other projects 15 going on. 15 THE COURT: Doesn't this letter say what these 17 figures are? 16 MR. COSM: No. it doesn't. MR. EDELL: Sure it does. 19 SHE COURT: It does, 20 MR. COMM: But, Judge, this so-called bio-res 21 22 covers all the work done in Arthur D. Little. There was 23 other work being done. TER COURT: That doesn't mean it's inadmissible. 24 MR. COMM: I know that. I'm trying to say what is 25

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2 This witness down't remember the numbers. 3 MR. EDELL: It's immaterial? MR. COMM: Why is it immaterial? The letter isn't 4 5 - addressed to him, he never received it. What you're trying to do is put in a letter that 5 he's sever ween before and he doesn't know the accuracy of. 7 73 MR. SDELL: Well, what I'm saying --9 MR. CONN: That's not the purpose of this witness, 10 your Monor. That's my point. 11 TAR COURT: I've heard that objection before. 12 Net's deal with admissibility. Is there any challenge to its admissibility? 13 14 MR. REARMEY: Yes. The challenge is it's simply 15 not probative of any issue in this case and its prejudicial value outweighs the probative value, if any, in the case. 16 We have in the record already several indications of the 17 amount of money spent on the bio-res project at Arthur D. 18 Little, it came in, one through Herris. 19 If you recell, he had charts comparing the amount 20 of meany apent in the various projects, Arthur D. Little 21 versus advertiging. It came in various different times. 22 Witnesses were asked to give their epinions on how much was 23 spent on the project. It came from a document that's 24 already in evidence. It's a document Harris testified to. 25

it being offered for? That's what I'm trying to get garone.

1	THE COURT: What do you say the amount in?
2	MR. EDELL: My recollection is that there is a
3	million dollars difference on these documents.
4	MR. REARMSY: My rampilection is that the project
5	is the same, about five million.
۶	- TR. EDELL: X'll check it out.
7	THE COURT: Can't we stipulate it?
8	MR. KRARNEY: I'm sure we can.
9	MR. COMM: The point is it's 1969. This thing
10	changes.
11	THE COURT: This is as of 1960?
12	PR. EDELL: Judge, I don't want to hold this up.
13	What I'm saying is whenever we take a break
14	we'll look at the other ones.
15	MR. CORM: This witness certainly
15	(The sidebar discussion is concluded.)
17	HR. BDELL: Ge to Page 172, line 18.
16	Q Have you ever heard of Fitzgerald and Dancer?
19	A Tes.
20	Q Who was that?
21	Andresticing firm.
22	Q Did they do work for Liggett & Myera?
23	A At one time they did, yes.
24	MR. SDELL: 174.
25	G Do you recall being informed by Arthur D. Little "that a
j	

1	THE COURT: Any objections to that?
2	MR. KEARHEY: Sorry, That was the page in the
. 3	beak?
4	MR. SDSUL: Page 21. Hr. Rearney.
5	MR. FEARBEY: No objection.
5	THE COURT: Jury may turn to Page 21.
7	MR. EDELL: I will ank the quaetion again.
Ì	Q Look at Bates 12 for identification and directing your
9	attention to page nine and ten, see if that refreshes your
10	recellection?
11	A I still don't recall it.
12	THE COURT: Just for our assistance, Mr. Edell,
13	nine and ten is what page numbers? Is it 24 and 25?
14	MR. EDELL: Excuse me, one second, your Homer.
15	Relieve the bottom of 24 continuing to the cap of
16	page 25.
17	THE COURT: The jury can turn to that then, 74 and
19	25.
19	THE COURT: We are westing on you, Wr. Edell.
28	MR. SDSLL: 183, line 14.
21	(pm. Connε What?
22	MR. EDELL: 182. 182.
23	O Did you rely upon Arthur D. Little to interpret the
24	literature for you regarding cigarette smoking and health?
25	Mr. Conn. I take it now "vou" refers to Dr. Hate

1 2 3 ₹. locating any other possible causative agent. É 7 Ω 7 17 11 not to pay them proper attention. 12 13 14 15 16 cancer."

number of statistical studies have been made in many different countries in an attempt to located the enent responsible for the increased lung cancer incidence. Some of these studies have apparently been more interested in -associating lung cancer with digarette spoking than in

While it is true that some of the studies have been done by persons who seem to be extremely biased in their views and in their interpretations of the results, it is not possibile to dismiss these finding as just statistics -- and

A number of able statisticians are on both sides of the question regarding the interpretation of the data and its eignificance. Essentially all of these studies agree that digarette amoking seems to be associated with lung

Do you recall somebody telling you that, sir, from Arthur D. Little?

I do not.

17

18

19

20

21

22

23

24

25

Question: Look at Bates 12 for identification.

MR. BDELL: That is in the jury binder at Page 21, yout Honor.

It's Plaintiff's Exhibit 6102. Direct your attention to pages sine and ten, see if that refreshes your recollection.

1	Mr. Sdell: Liggett & Myers, sir?
2	A Certainly valued Arthur D. Little's opinion, but 32
3	necessarily relying on it. I don't have the mlightent ic
4	whether they did or not.
5	Q As a matter of fact, Siggett & Syers contracted with
5.	Arthur C. Wittle to prepare a submission to the Suracan
7	General on behalf of Liggett & Myers regarding the
9 .	literature pertinent to digarette smoking and health, didn
3	they?
10	A 703.
11	MR. CORNI I ank that Page 183 be read from line !
12	through 184, to line 15.
13	MR. EDELL: If he asks for much more, I will have
14	bim read it, your Monor.
13	THS COURT: I will permit it to be read.
16	Q Did they rely on anybody eise to do that on their
17	behalf, sir?
18	A Ro.
19	Q Did Liggett & Myers submit anything itself to the
16	Surgeon Coneral?
21	A Yes, considerable, yes.
12	Q Who prepared that information?
23	A The laboratory at Liggett & Myers.
24	Q Did any of that information deal with an interpretation
25	of the literature regarding digarette amoking and bealth?

PHYLLIS T. LEWIS, CSR & JOANNE M. HOUSTON, CSR

1	A Not - in apart on the part of Liggett & Myers. Part in
2	that record to the Surgeon General from Liggett's
3	. laberatories had to do with chemistry and cigarette
4	manufacturing technology and filtration.
5	O That portion of the report dealing with an
5	interpretation of the literature
7	A Was prepared by Arthur D. Little.
8	Q Why was it prepared by Arthur D. Little and not by the
9	research and development facility of Liggett & Hyers?
10	A Because in the research department at that time we
11	didn't have anyone qualified in any field other them in the
12	chemistry and engineering and physics.
13	Q So for the purposes of this, the subsission to the
14	Surgeon General regarding the interpretation of the
15	literature on eigarette ameking and health, Liggett & Myers
16	relied upon the expertise of Arthur D. Little. Ten't that
17	correct?
18	A To summarize the literature, yes.
19	Because it didn't have the espability of doing that
20	Correct?
21.	Their serrect.
22	MR. EDELL: Page 187. Referring to biological
23	experiments.
24	Q They told you that these materials were cancer cassing?

*	TINCETON'S FUNE COMPAN FRANCE AN FIRST MORRA! MYCH ANTU!
2	Q Se your enswer is yes? Is that correct, sir?
3	A They told us materials that were active in mouse Ex
4	preduce tumors.
5	Q Did they tell you that they were cancer causing or
5	materials that were cancer causing?
7	A fa mice.
8	O Did they tell you that there were materials that were
•	cancer premoting?
10	A In mice, yes.
11	O Are esters, phenols and amines found in eighrette smot
12	air?
13	A Some of them are, yes.
14	Q Is that statement contained in the paragraph correct,
15	siz, quote, the
16	MR. COEM: Sucuse me, what page.
17	MR. EDELL: 193, line 22.
18	MR. REARMST: This question refers to what was
19	marked as Bates 17 and that appears is complete form in
20	sending book at tab five. I would ask the jury to be
23	Manuted to that, nov.
33	M. EDELL: No objection.
23	THE COURT: Jury what tab?
26	MR. KEARMEY: Tab five, your sener.
25	THE COURT: Tab five of the defendants' book.

PHTLLIS T. LEWIS, CER & JOANNE M. HOUSTON, CER

MR. ERARMEY: Under Bates. 1 MR. EDELL: One of the jurors --2 3 A JUROR: I don't have a five. You don't have a five either? 5 A JURGR: So. 5 THE COURT: Look on with your neighbors for the 7 time being. ø Question: Is the statement contained in the paragraph 9 .) 10 correct, sir, the possible injurious effects of eigasette 11 smoke on the human system have been a source of condern to 12 the Liggett & Myers Tobecco Company for many years. A 13 tangible expression of this concern was evidenced early in 14 1954 with the establishment of a biological test program at 15 Arthur D. Little, Inc. of Cambridge, Massachusetts? I think -- would you ask the question again, please? 15 17 Yes. 18 MR. RDELL: Page 196. 19 Me. CORN: Your Henor. We would request for that this reading start at the preceding page, 20 R the bottom of the page, line 25, and proceed 21 through line 12 of 196. 22 23 THE COURT: Well, that doesn't seem to be necessary for completeness as to that limited question and assver, so 24 I will not require it. You can read 13 and 15. 25

1	Q Question: Cardinomas are cancers, sir. Is that
2.	correct?
İ	A As far as I'm aware they are, yes.
4	MR. EDELL: Page 216.
5	9 Were you aware of work that Arthur D. Little did for
5	Liggett & Myers with respect to litigation?
7	A Yeah. I recall that they did some.
8	Q What is your recollection of that work, air?
9	A I never, to my knowledge, never saw any of the results
10	of the work.
11	Q How did you become evere that Arthur D. Little was doin
12	work for Liggett & Myers with respect to litigation?
13	A I quess let me see. I may have misstated it when I
14	said litigation, in that the only real recollection I have
13	is that I met Erwin Miller who is a statistician and ?
16	knew was at Arthur D. Little in Washington at some
17	congressional bearings and found out he was doing some work
18	for Webster Sheffield.
19	Q You weren't evere that Dr. Machie was making
20.	A separations with respect to expert witnesses that were
25	by Liggets, Myers
22	To.
23	Q in terms of litigation?
24	A Wo.
25	Q De yeu recall Dr. Barkis testifying in a product

transfirst accion promine admines produce a white po hod
semember the Pritchard case, sir?
A I heard of the Pritchard case, yes.
Q De you remember Dr. Wensler testifying in that matter?
A No, L don't.
Q De you recall Liggett & Myers eventually joining the
counsel for Tobacco Research?
A There are you, Mr. Edell?
MR. EDELL: Page 222, line eight.
Q Do you recall Liggett & Myers eventually joining the
counsel for Tobacco Research?
A Yes.
O De you recall when that occurred, sir?
A I don't recall precisely. I think it was subsequent to
1964, but I am not certain.
Q Were you part of the discussions at Liggett & Myers in
which the decision was made to join the Council for Tobacco
Research?
SDELL: Szeuce me.
The meticipated in these discussions other than
yourself?
A Mr. Marrington, who was provident, and Mr. Hoss who was
general counsel, and myself were the three majorer
perticipents.

1	Q Any misor participants?
2	A Mone that I recall,
3	9 Where did that meeting occur, or series of meeting?
4	A I think we have had several telephone conversation
5	not three-party conversations but one to one, and a brief
6	meeting or two in Mr. Rarrington's office in New York.
7	MR. SDELL: Turn to 224.
8	G What is the Council for Tobacco Research, sir?
9	A It was an organization financed by several tebecce
10	companies, ? am not certain now of who all they were, for
11	the purpose of making grants to scientists to do research
12	subjects that related to tobacco and digarettes.
13	O Did it have anything to do with the legal affairs of
14	Liggett & Myers that you're aware of?
15	A Not that I'm aware of.
16	Q Did the Council for Tobacco Research in any way, or χ
17	contact with that association is any way, deal with the
18	legal affairs of Liggett and Myers?
19	A No, not to my knowledge.
24	Took your discussions with Mr. Moss deal with the legs
22	description of joining the Council for Tobacco Research?
22	ä 10.
23	A Mo.
24	Q Tell us about your conversations with Mr. Hoss on the
25	subject, sir?

3	A Mr. Marrington wanted, for some reason which I never
2	understood, wanted Liggett to join the Council for Tobacco
3	Misearch. I thought Liggett could apend its money to
4	Liggett's benefit, greater benefit by spending it through
5	our research department. As I recall, Mr. Moss didn't
6	really have such opinion one way or the other.
7	Q What was Mr. Serrington's articulated reason for joining
8	the Council for Tobacco Research that you couldn't
9	understand?
10	A I think he had been approached by the director or
12	wheever the person was at the Council for Tobacco Receich
12	to do it and had been under some continuing not pressure,
3	but continuing requests from Council to join it and I
4	assumed that their reason was to increase their grant money
5	and Mr. Marriagton decided that we would join, but he as
6	I guess an SOP to me, he decided that he told me to work
17	with the people in a cooperative fashion and that we would
	re-evaluate it at some subsequent time.
	Quality old you feel that Liggett's money would be better
16	the the research that was being conducted at the
12	minutes department at Liggett & Myers, as opposed to
12	contributing these monies to the Council for Telecco
23	Research?
14	A I sliuded to this yesterday. It's a basic research
15	philosophy I have if you're doing goal-criented research you

•	Car on it mate attractantly by directifd it is a scab-ph-st-
2	fashion than you can a by granting small portions to a lot
3	ef different individuals. In a directed program you can cu
4	eff avenues which don't prove fruitful, you can shift to
5	more fruitful avenues. Whereas, with the grant program
\$	you're stuck for the period of the grant. That's the basis
7	of my reason.
8	Q Did your opinion in regard to how the research should b
9	conducted in the most efficient manner remain the same
0	during the entire time period that you were director of
1	research for Liggett & Myers?
2	A Yes.
3	Q Did you articulate that opinion to other executive
4	members of the corporate staff of Liggett & Nyers?
5	A Only those that I thought would help.
6	Q Who were they, sit?
7	A Primarily the chief executive officer.
	Q Who was it other than Mr. Marriagton? Anyone other tha
5	Mr. Merrington?
	Color subsequent to Mr. Sarrington's presidency, Mr.
T	Top one president.
3	Tou informed him of your opinion also, Mr. Mulligan.
3	that correct?
4	A I den't recall whether I did or not because we
	eventually got back out of the Council for Tobacco Reseate

•	and I don't lacall ander and a bresteauch it ass.
2	@ But it was during the time period that you were research
3	director?
•	A Yes.
5	MR. EDELL: Your Monor, can we take our afternoon
•	recese?
7	THE COURT: Yes, We'll resume at four o'clock,
	THE CLERK: All rise.
•	(Recess.)
16	THE CLERE: All rise.
11	(The following takes place in the presence of the
12	jury.)
13	THE COURT: Please be seated.
14	Wr. Edell.
15	MR. EDELL: Page 228, line five.
16	O Do you recall any meetings with other scientific
17	directors of other diserette manufacturers regarding the
18	research that was being conducted concerning digarette
19	emphine and health?
28	The some meetings with other research directors while
23.	the Council for Tobacco Besearch. And on
22	econoion I had meetings with other research directors at the
23	Tobacco Institute when they became interested in some
24	specific scientific subject.
25	Q What is your recollection as to how the Council for

Tobaseo Research funded research?

A The scientific staff at the Council for Tobacco Researc received proposals for research and requests for grants fro various scientists around the country, I presume around the world. I don't recall precisely.

The staff assembled these things and there were periodic meetings of their acientific advisory council, who were scientists from around -- and the scientific council had whatever discussions they felt measurey and either accepted or rejected grant proposals. Senetimes they sent them beck for medification.

Cace they were accepted, the staff of the Council for Tebacco Research did the general administration of them and got the money to the grantees and received reports back from the grantees.

It's sort of a standard format on doing scientific grant work.

O Did you know any of the members of the scientific advisory heard for the Council of Tobacco Research?

that, sic?

A I can't remember his full name, Dr. Lynch from -- he's deed now. He was -- chief of obstetrics at the Medical University of South Carolina in Charlesten.

The reason I knew him, I was -- he was married to

<u>.</u>..

•

-	
2	• To the name Merrill Lynch?
3	· A. No.
4	Q Remeth Lynch?
5	A I beg your pardon?
6	Q Renneth Lynch.
7	A Beg your perdon?
8	Q Ken Lynch?
9	A Yes. Kenneth Lynch sounds familiar, anyhow.
10	MR. EDELL: You had to be there, Judge.
11	THE COURT: I have to tell the jury, if I can'
12	interrupt, there was somebody who tried a case in this
14	interrupt, there was somethey and tries a tase in this
13	courtbouse representing himself and he would ask the
14	question and them answer it himself and he would ask the
15	question and say, "Would you mind reposting it?"
16	Excuse me, Mr. Edell.
17	MR. EDELL: Page 230, line seven.
16	Q De you know whether or not be had any
19	COSH: Your Monor, can we have the line after
26	Moneth Lynch sounds familiar. Lines four through
21	
22	MR. EDELL: ['11 reed them.
23	g Did you ever meet with him on a personal basis?
24	A Me.
25	Q De you know whether or not he had any expertise in the

1	area of research concerning digerette emoking and health?
2	A. I here no idea.
3	Q All yes know, he was involved in obstetrics?
4	A Re was, as I recall, the chief of obstetrics at, you
5	know, the Medical University of South Carolina Medical
•	School.
7	Q Did you ever attend meetings of the Council
8	MR. COHM: Can we have the belance of that page,
•	from line 16 to 23 read?
10	THE COURT: He has no knowledge. No, I don't think
11	it's necessary.
12	Q Did you ever attend meetings of the Council for Tobacco
13	Research?
14	A I attended a few of the scientific advisory meetings.
15	Q What did you mean by scientific advisory meetings?
16	A Where they passed on grants.
17	Q Did other research directors attend those meetings,
18	other than yourself?
19	A Conscionally. It was by invitation only. They would
20	directors or maybe three. Sometimes they, to my
31 . ·	they met semetimes without inviting any directors
22	but I did attend several meetings.
23	Q Do you remember who E. Harlew was?
24	A Who?
	1

1	A Sdward?
2	Q You would know better than I.
3	We's from American Tobacco Company?
4	A Yes.
5	Q Who is he, sir?
8	A He was a chemiat and I think at one time no was director
7	of research of the American Tobacco Company, but I'm not
3	I'm a little hezy on what his positions were.
9	Q Do you know a R. B. Griffith from Brown & Hilliamson?
10	A Yes.
11	Q Do you know his first name?
12	A Robert.
13	Q De you know what position de you know what his
14	position was with Brown & Williamson?
15	A Director of research at Brown & Williamson.
15	Q H. Senkus?
17	A Yes.
18	Q Who is that?
19	A Dr. Marray Senkus from R. J. Reynolds Tobacco Company.
20	Q What position did he hold?
21	A Director of research.
22	Q Dr. Wakebam?
23	A Yea.
24	Q He was with Philip Morris?
25	A Yes.
	1

Alexander Spears? 1 0 2 Yee. What position did he bold? 3 A He was director of research at Corillard. 4 ٩ Q. Do you recall meeting with those gentlemen in Pebruary 5 of 1968, at Hilton Head, South Carolina for two and a half 7 days? 5 ٨ Yes. 9 Do you recall the purpose of that meeting, sir? Ű. 16 Conerally, yes. A 11 What do you recall the purpose of that meeting to be? Q 12 Purpose of the aseting was to attempt to make some 13 recommendations to verious management individuals in the 14 tobacco industry to fund a directed research program into 13 acientific areas of interest to the tobacco industry. 15 Whose idea was it to have that meeting? 17 Dr. Griffith. We called the meeting. Did you have any discussions with anyone at Liggett 18 concerning your participation in that meeting? 19 28 Too. Who did you speak to prior to going to that meeting? 21 22 Mr. Moss. Did you have any conversations with Mr. Hoss regarding 23 the legal aspects of the meeting? 24 A That was the purpose of my meeting with bim. 25

1 Did you discuss your going to that meeting with anyor 2 else other than Mr. Mosa? He. 3 Did Mr. Hose give you any quidelines? 3 Yes, but I don't recall what they were. A 6 -What occurred at that meeting in Pabruary, 1968? Q. We sat around tables similar to this and talked. 7 Λ What wan the substance of the conversations? 8 0 3 As I outlined before, an attempt to visualize an 10 organisation to do research that would be diverged from 11 proprietary interest of the individual tobacce companies. 12 One of the reasons that Dr. Griffith, I think, 13 called the group together was that he know in his own mind 14 that in his laboratory -- he thought that all of cur laboratories were attempting to do good science and every 15 time we published anything, somebody credited it only with 16 17 being the result of having been bought by a tobacco company 18 and it was an attempt to establish an organization that 19 would create more credibility in the scientific community, 20 Why was that necessary, sir? 21 Just a prejudice of certain individuals. . A Projudice of which individuals? 22 Q 23 People that think that any science done in an industrial organization is bought and that they can buy the results 24 25 they want.

1	O The purpose of the meeting was to form a millerent type
2	of research entity whiler than the CTR. Isn't that correct?
3	A It was a directed research organization, not a grant
4	organization. It was we visualized
5	- 3 You say you visualized what, sir? You said "we
G	vizualized*?
7	A We visualized that was one product of our meeting so
3	there was no it was a different it was different icom
3	the Council of Tobacco Research.
10	MP. SDELL: Page 238.
11	Q I show you Setes 23 for identification.
12	And tell us, sir, whether or not that is the
13	memorandum which you prepared for Mr. Harrington as a result
14	of your attending the meeting in February of 1968, with the
15	other acientific directors from American, Brown &
15	Williamson, P. Lorillard and Philip Morris and R. J.
17	Reynolds.
18	A Yes.
19	MR. SDELL: That's plaintiff's exhibit 919, your
20	Somer, in the binder at page 25.
21	THE COURT: Any objection?
22	MR. COMN: No.
23	THE COURT: The jusy may turn to page 26.
24	Q Your recollection of the events of that seeting
/ %	costainly were clearer on February 18, 1968, than they are

7	today, correct, sir?
2	A Tes.
3	Q You had been instructed by Mr. Moss not to take part in
4	any discussions of the mission of a possible reorganization
5	of CTR. Is that correct?
S	A I don't recall that.
7	O I refer you to page two, mir, where it mays exactly what
o,	7 just read to you.
9	A That's what I said.
10	O Do you recall why Mr. Hous gave you that instruction,
11	sir?
12	A No.
13	Q You went back and communicated the consensus of the
14	research directors to Br. Harrington as set forth in Baces
15	23. correct?
16	A That's correct.
17	MR. EDELL: Page 248, line 23.
19	O What was your understanding of the work that was being
. 5	funded by the tobacco industry through the AMA?
10	A That the tobacco industry provided a certain amount of
21	memor, the amount I do not know, and there was a research
12	committee or some group within the AMA that received
3	proposals from their members. And based on what they
24	thought the werits of the proposals were, they granted money
15	for them to do the research.

i	
1	Q Did you at any time review the work
2	MR. COUM: Your Honor, I would request that lines
3	eight to 13 on page 249 be read.
4	MR. Whell: Your Honor, there are no responses. F
s	doean't add anything.
5	THE COURT: No, they need not be read.
7	Q Did you at any time review the work that was being
0	funded through the ANA?
3	A I've listened to presentations in a big upen meeting
10	made by the researchers.
11	Q Where were these meetings, sir?
12	A I think I attended one in well, suburb of Phoenix.
13	Q Scottsdale?
14	A Yes.
15	2 19707
16	A I don't recall the time.
17	And I also attended one in Newport Beach,
18	California.
19	Q Did you ever ask Dr. Hold to evaluate the AMA program
20	Lat you?
21	A mot that I recall. I never had anything for him to
22	evaluate. I never had any reports or documents of any sort
33	that I recall.
24	Q You understand that when I am talking about this AMA

program, it's the AMA-ERP program, Education Research

	1
1	Poundation?
2	A Yes. I think that was what they called their grant
• 3	committee or whatever.
4	Q Did you review the publication of the loundation's
5	conclusions after they were published?
-6	A Tro.
7	Q You have no recollection of having Dr. Mold look int
3	the AMA-ERF program. In that correct?
9	A Tast's I have no recollection of it.
10	Q I'm going to show you a document which was marked at
11	Provost's deposition.
12	I'm going to show you a document marked Bates 25
13	for identification, sir.
14	MR. EDSLL: That's in the jury binder at page 31,
15	your Gonor, plaintiff's exhibit 1322.
16	THE COURT: Any objection?
17	MR. FEARNSY: No.
18	MR. COBM: We, your Boner.
19	THE COURT: The jury may turn to page 31, ta it?
20	MR. EDELL: Thirty-one, your Sonor.
21	Q It is a memorandum from James D. Mold to Dr. W. W.
22	Betes, Jr., June 16, 1970, subject, AMA-ERF program of
23	research on tobacco and health.
24	The first sentence reads: "You have requested that
25	I comment on the AMA-ERP program of research on tobacco and

1 health." I'd like for you to review this document and one if 2 it refreshes your recollection with respect to whether or 3 not you asked Dr. Wold to evaluate the AMA-MRP program. 4 I don't recall having seen this before. S 5 Dr. Bates, I'm going to show you a document which has been marked as Bates 25 for identification. 3 It's entitled: "Comments on AMA-ERF Program for 9 Tobacco and Realth From the Research Directors of the Supporting Companies. ? 10 MR. EDESL: That's in the binder at page 35, your 11 Fonor. Plaintiff's exhibit 1321 in evidence already. 12 13 THE COURTS The jury may turn to page 35. See if that refreshes your recollection with respect to 14 attending a specific secting in Scottsdale, Arizona on May 6 15 through 8, 1970. 15 I'll also represent to you that that document was 17 contained in the files of Liggett & Myers. 19 Bir, does that refresh your memory with respect to 19 whom wan attended a secting in Scottadale, Arizona? 28 21 It gives the date. May of 1970? 22 0 If that's what it cays. I assume it's the same date,

to you recall having a discussion with other

isn't it?

23

24

ı	representatives of the research departments of the member
2	companies?
3	A So fermal discussion that T recall.
4	Q. Do you recall informal discussions?
5	A Sure. I can into one or another that were in attendance
5	at lunch of at dinner, but I don't recall any meeting which
7	drafted any position or suggested or anything of that
9	nature.
3	Q Do you recall that being the general opinion of the
10	agrentific representatives that not more than 30 percent of
11	the program was relevant to smoking?
12	A I don't recall arriving at any consensus whatsoever.
13	Q Did you formulate
14	A Hy opinion was that very little of it was other than
15	toxicology or micotine.
15	Q Very little of it related to smoking?
17	A Very little of it related to smoking.
7.8	Q Did you reported that fact to anyone at Liggett & Hyer-?
29	A I dea't know.
20	Q. 1970, you were on the Board of Directors of Liggett &
21	Myese?
22	A Tes.
23	MR. SDELL: Page page 279, line 17.
24	Q At some point in time the company did initiate a tobacco
25	additive program designed to reduce or eliminate the

PRYLLIS T. LEWIS, CSR & JOANNE M. HOUSTON, CSR

1	finoildante westated or endatases many, sottage;
2	A On nouse backs.
3	Q I'm sofry?
4	A That's correct, as far as mouse backs in concerned.
5	Q There were also tests performed by Arthur D. Little to
5	determine what biological effect palladium would have.
7	Tan't that correct?
8	A I think those were done. I think they were being talked
?	about when I left. Thether they I don't know whether
12	they actually did them or not.
11	Q Why was it proposed that anisal studies be performed
12	with respect to pelladium?
13	A Because it was a substance that was not native to
14	tobacco, that was being added to tobacco and wented to make
15	wure that there was no unexpected effect due to palladium on
16	the biological systems.
17	Q You didn't know what effect palledium would have on
18	animals or human beings, correct?
19	Mr. Cohn: By you, who do you mean?
20	Mr. Edell: Liggett & Myers.
21	A We never tested didn't propose to test on human
22	beings.
23	We were testing the course of research which led
24	to the use, to the possible use of palladium on tobacco was
74	guided by the skin tumors on mice.

When a composition of tobacco and palladium was 1 developed which gave few or no oxin tumors, we then 2 subjected the smoke to some other tests, which ones I dea's 3 4 recall, to see Whether we had inadvertently increased the ciliary activity or some other property of the digaratte .5 Ś EXCORM. 7 3 By including palladius, correct? * 1 A By including pelladium, yes. 7 O . That was an close as you could get to see whether paliadium would be safe to use in humans being, correct? 10 11 Well, we did chemical tests to see whether palladium remained in the digarette ash or whether it was transmitted 12 13 in make, tests of that sort. 14 But one of the reasons that the enimal studies were 15 being done with pailadium was to see whether or not palladium might be harmful to a biological --16 17 Λ System. 18 ្ន -- system, correct? 19 Correct. 20 That was as close as you could get to seeing whether or 21 not it would have an effect on human beings, correct? 22 It was an close as we had facilities to, yez. 23 Because it was unethical to do that type of 0 24 experimentation on human beings, correct?

PHILLIS T. LEWIS, COR & JOANNE H. HOUSTON, CSR

That's what the physicians say, yes.

1	Q You do recall that when palladium was added to the
2	tobacco, that there was a reduced incidence of papilionar
3	and carcinomas in mice, correct, sir?
4	A That's correct
5	Q Was that information made available to the public?
6	A It was made available to the Mational Cancer Institute
7	for their tests.
3	MR. FUELL: That is it for Dr. Bates, your Honor.
9	THE COURT: Okay.
10	Whose Copies are these?
11	MR. Thett: Mr. Rearney's.
12	May we be heard at mide bar?
13	THE COURT: Yes.
14	(Side ber.)
15	THE COURT: Are we through for the day?
16	MR. SDELL: Yes. They are going to get an
17	unredacted version, and I didn't want to put it in the
18	record in open court.
19	MR. PARRISE: Socry.
28	MR. EDELL: Unreducted of 939.
21	THE COURT: Nothing else. We have to sule on Mr.
22	Darnell's matter.
23	MR. BLEAKLEY: Before you excuse the jury, I have
24	one matter

PHYLLIS T. LEWIS, CSR & JOANNE M. HOUSTON, CSR

THE COURT: What will we do about it?

<u>WITNESS</u> <u>DIRECT CROSS REDIRECT RECROS</u>

DANIEL PROVOST

By Mr. Edell 2484 2548

By Mr. Cohn 2543

Deposition of Walter E. Carroll read - pg. 2559

Deposition of William Bates, Jr. read - pg. 2587

EXHIBIT	IDENT.	EVD.
P-2705		2492
P-2745		2502
P-939		2556